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EFFECT OF SIX-WEEK AQUA STRENGTH TRAINING ON SELECTED MOTOR ABILITIES OF COLLEGE ATHLETES

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ABSTRACT

This research was conducted to analyse the effect of AQUA training on selected motor ability variables among college handball players. The purpose was to compare and analyse the data collected from each selected variables. For the purpose of the study, twenty players of 18 to 25 years old were selected as subjects for the investigation. These students were started AQUA training in University of Calicut, Kerala. The pre-test was administrated by researcher during their first day of training and post-test were administrated after six weeks of training. The selected variables for the study were Speed, Agility and Quickness. The pre-test and post-test score of the experimental group and controlled group were statistically analysed and to find out the significant difference between pre-test and post-test score of the experimental group and controlled group, the t-ratio was employed.

KEYWORDS: *AQUA training, athletes, motor abilities.*

INTRODUCTION

Games and sport have recorded in pages and pages of history as recreational and competitive activities throughout human history. Sport has an important part in today's society. It matters to an individual, a group, a nation, and, yes, the whole globe. Sports have an essential role in delivering health benefits, economic and social integration, and inclusion, in addition to their competitive aspect. It is an element of the non-formal education process. It encourages cross-cultural exchange and employment creation. Physical education is concerned with basic actions such as walking, running, leaping, throwing, and so on, and all of these activities are structured as games, sports, and play. Play is a pleasurable experience that results from self-initiated conduct that is guided by personal aims of expressive impulses. It tolerates a wide variety of motions and has no set rules. It has a definite beginning but no planned finish. A game or sport is a human activity that incorporates a specialized administrative structure and a historical foundation of rules that define the goal and constrain human behaviour patterns. These are activities in which time, place, training, and regulations have been agreed upon to define the goal and constrain the pattern of human activity.

When we workout in the water, we must master a variety of techniques. Each of water's qualities has a unique influence on our bodies, with the level to which they affect our motions being mostly determined by our body type, body composition, and fat distribution. To maximise the training advantages we obtain, we must learn how to manage the water. New skills will be required to maintain

and restore balance; new abilities will be required to regulate our centre of buoyancy and produce or avoid undesired movement; and new skills will be required to sustain floating.

Water aerobics (also known as aquatic fitness, aquafitness, or aquafit) is aerobic training done in relatively shallow water, such as a swimming pool. It is a sort of resistance exercise that is done largely vertically and without swimming in waist deep or deeper water. Aquatic resistance training is a type of aerobic exercise that requires participants to be submerged in water. The majority of water resistance training takes place in a group fitness class setting for roughly an hour, with a trained expert instructing.

Swimming is becoming increasingly popular as a form of exercise. Take a look at how many successful sportsmen and sports teams are now emphasizing aquatic training and bragging about the achievements they've achieved. Because of the water's unloading quality of buoyancy, aquatic exercise considerably relieves stress on your joints, bones, and muscles. This is a highly safe and effective approach to exercise, and it helps people with injuries to begin exercising sooner and with less pain. People who suffer from back discomfort, neck pain, or just wish to avoid the hammering of land-based exercise should follow the specialists' advice and head to the water.

DELIMITATIONS & LIMITATIONS

The study was delimited to twenty college athletes were only selected as subject for this study. The subject's ages ranged from 18 to 24 years and were selected (N=20) from University of Calicut, Kerala. Ten athlets were selected as control group and other ten was selected as Aqua training group. The duration of the training period was restricted to six weeks. The bio motor abilities such as speed, agility and quickness are selecting as criterion variables for this study.

The uncontrollable factors associated with the study were accounted as limitations of this study. The previous experience of the subjects in the field of sports and games which might be influencing on the training and data collection, were not considered. The investigator did not put any effort to control or assess the quality and quantity of food ingested separately for each individual. And the subjects were motivated verbally, no attempt was made to differentiate the motivation level during the period of training and testing.

SELECTION OF VARIABLES

The desirable development of a handball player basically depends upon with the bio-motor ability. The combination of bio motor ability and skill ability will help the team to achieve the optimum performance in the game of handball. Taking into consideration of all these factors, a set of variables was selected to test on the subjects, for observing the variations in their levels due to training. The variables selected and tested were:

BIO MOTOR ABILITIES

1. Speed
2. Agility
3. Quickness

SELECTION OF TESTS

The present study was undertaken primarily to assess the impact of Aqua training on bio motor abilities. The investigator analyzed various available literatures, had consulted the experts in the field of physical education and selected the following standardized test items to collect relevant data on the selected dependent variables and they are presented in table-I.

Sl. No	Criterion variables	Test items	Unit of Measurements
1	Speed	50meters dash	Seconds
2	Agility	Shuttle run	Seconds
3	Quickness	Choice-response test.	Seconds

TRAINING SESSION

Each work out session was lasted for 75 to 90 minutes.

AQUA TRAINING EXERCISES

	EXERCISES		
Sl. No.	**Low intensity**	**Medium intensity**	**High intensity**
1	Pool press ups	Float and pull	jump twist
2	Sweep through	Kettlebell Squat	V-shaper
3	Ballet jump	Chest & back press	Front squat
4	Pressure punch	Leg extension	Lateral pull
5	Float and pull	Jumping jacks	----------
6	Military press	Lunges	Tuck jump
7	Bear hugs	Partner pull	----------
8	Lunge walk	Weighted high knees	Take off

FINDINGS

Speed

The data on speed of the pre-test score and post-test were statistical analysis by t-test and the results are presented in Table.

PRE AND POST TEST SCORE OF SPEED

Control Factors	Pre test		Post test		df	t value
	N	SD	N	SD		
Experimental	10	0.321	10	0.292	18	5.751*
Control	10	0.139	10	0.137	18	0.559

* Significant at 0.05 level of confidence. The table value result for significance is 2.101.

Table above shows the number of subjects, standard deviation and 't' value of speed of experimental and control group. The mean values of experimental group pre and post test were 6.18 and 5.92 and that of control group pre and post were 6.145 and 6.137. The standard deviation of experimental and control group pre and post were 0.321, 0.293 and 0.139, 0.137 respectively. The above table indicates that, there was a significant difference between the pre and posttest performance on speed of experimental group, since the calculated 't' value of 5.751 is higher than tabulated 't' value of 2.101 at 0.05 level of significance. In the case of control group, there was no significant difference were shown.

Agility

The data on agility of the pre-test score and post-test were statistical analysis by t-test and presented in the table.

PRE AND POST TEST SCORE OF AGILITY

Control Factors	Pre test		Post test		df	t value
	N	SD	N	SD		
Experimental	10	0.466	10	0.423	18	5.009*
Control	10	0.230	10	0.170	18	1.220

* Significant at 0.05 level of confidence. The table value result for significance is 2.101.

Table shows the number of subjects, standard deviation and 't' value of agility of experimental and control group. The mean values of experimental group pre and posttest were 12.247 and 11.936 and that of control group pre and post were 12.253 and 12.234. The standard deviation of experimental and control group pre and post were 0.466, 0.423 and 0.230, 0.170 respectively. The above table indicates that, there was a significant difference between the pre and post test performance on agility of experimental group, since the calculated 't' value of 5.009 is higher than tabulated 't' value of 2.101 at 0.05 level of significance. Here control group shown no significant difference.

Quickness

The data on quickness of the pre-test score and post-test were statistical analysis by t-test and presented in the table.

PRE AND POST TEST SCORE OF QUICKNESS

Control Factors	Pre test		Post test		df	t value
	N	SD	N	SD		
Experimental	10	0.088	10	0.074	18	5.4*
Control	10	0.080	10	0.087	18	1.280

* Significant at 0.05 level of confidence. The table value result for significance is 2.101.

Table shows the mean values of experimental group pre and post test were 1.746 and 1.684 and that of control group pre and post were 1.71 and 1.724. The standard deviation of experimental and control group pre and post were 0.088, 0.074 and 0.080, 0.087 respectively.

The above table indicates that, there was a significant difference between the pre and post test performance on quickness of experimental group, since the calculated 't' value of 5.4 is higher than tabulated 't' value of 2.101 at 0.05 level of significance with 18 degrees of freedom. No significant difference were noted from the results on control group.

DISCUSSION OF FINDINGS

The finding of the study revealed that the experimental group (AQUA trainees), improved significantly on the selected variables of speed, agility and quickness, whereas no significant difference was found in control group. Scientifically and systematically monitored AQUA training programs are expected to improve overall development of individuals in general and improve speed, agility and quickness in specific. Hence it can be concluded as the AQUA training program can significantly increase the motor abilities such as speed, agility and quickness in college level athletes and it will helps in better performances. So inclusion of AQUA training in workout schedule of athletes will helps coaches and trainers to drawn best result from their trainees.

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